Cataract Surgery and Uveitis

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Cataract is a common complication of uveitis, resulting from the uveitis itself and or its treatment with corticosteroids which is the cornerstone of acute and short-term uveitis treatment. Cataract developing in an eye with a history of chronic or recurrent uveitis has historically been called "cataracta complicate" which means a complex type of cataract. It is a complex procedure both from the surgical techniques and approach standpoint (limited access secondary to corneal haze and opacities, posterior synechiae, pupillary membrane, pupillary sphincter sclerosis and membrane, iris delicacy and vascular abnormalities, and pre-existing glaucoma) and the likelihood of an exuberant postoperative inflammatory response which can affect the surgical outcomes. However, new sophisticated small incision techniques, availability of pupil stretches, viscoelastic materials (adhesive versus dispersive), and high-quality intraocular lenses have dramatically improved the results of cataract surgery in uveitis.

Despite these advances, visual outcomes following cataract surgery in patients with a history of uveitis may remain suboptimal. This typically occurs for two main reasons: preexisting damage to the macula and/or optic nerve from recurrent or chronic—even low-grade—inflammation prior to cataract surgery; and persistent or recurrent inflammation that compromises an initially favorable postoperative visual outcome. Both problems are potentially avoidable by preventing structural damage to ocular tissues. This requires a treatment philosophy of no tolerance for chronic or recurrent inflammation, with escalation of therapy in a stepwise, stepladder approach to achieve complete steroid free remission for at least 3 months. This philosophy often prevents cataract formation in patients with uveitis. It is important to note that the patient should be prepared perioperatively with corticosteroids employment to prevent any intraocular inflammation postoperatively. Additionally, immunomodulatory therapies can prevent recurrent or persistent inflammation after surgery.

Despite adherence to the major principles, surgical details—including technique and intraocular lens implantation—must be individualized for each patient; however, meticulous removal of lens material and selection of a uveitis-compatible intraocular lens should be considered in all cases. Nevertheless, intraocular lens implantation warrants careful consideration in specific forms of uveitis, such as Juvenile idiopathic arthritis and sarcoidosis. Additionally, addressing comorbidities such as glaucoma, vitreous opacities or band keratopthy during cataract surgery should be considered. Glaucoma procedures are very disease dependent and patient specific. Simultaneous pars plana vitrectomy may be considered in JIA-associated iridocyclitis, pars planitis, and significant vitreous opacites with cataract surgery.

Finally, it is important to note that in patients with chronic infectious uveitis such as herpetic uveitis or toxoplasmosis retinochoroiditis, perioperatively prophylactic treatment for these infections is highly recommended.

For further reading on this subject may we suggest the following references.

References:

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